

www.howardcountymd.us  
FAX 410-313-3467  
TDD 410-313-2323

TECHNICAL STAFF REPORT  
Planning Board Meeting of June 5, 2014

**Petitioner:** Columbia Association

**DPZ Recommendation:** Approval.

**Location:** The proposed Lake Kittamaqundi Multi-Use Trail is located at the northern end of Lake Kittamaqundi in Columbia Town Center. The property is zoned as NT – OS (New Town - Open Space) and is 39.8 acres in area. Vicinal properties are occupied by commercial and residential uses and the US29 right-of-way is located east of the project.



### Vicinity Map

#### SDP-08-108, Lake Kittamaquundi Multi-Use Trail

**Site History:**

- 01/07/2010: Site Development Plan SDP-08-108, Lake Kittamaqundi Restoration approved by the Department of Planning and Zoning. Scope of work included maintenance dredging, wetland creation and dam repair.
- 03/31/2014: Redline revision to SDP-08-108 submitted to DPZ for construction of Lake Kittamaqundi Multi-Use Trail.
- 04/14/2014: Petitioner notified that redline revision to SDP-08-108 was approved subject to Planning Board approval.

**Site Improvements** - Proposed site improvements include construction of a ten-foot wide paved trail from the existing paved trail located on the eastern side of Lake Kittamaqundi, circumventing the northern end of the lake, and meeting the existing paved trail located on the western side of the lake. The paved trail will follow the alignment of existing dirt, gravel and grass trails currently in use. The trail includes a timber boardwalk at the northern end of the lake to cross low-lying areas and an existing stormwater management facility outfall structure. The project includes placement of an imbricated riprap wall along the western bank of the Little Patuxent River to protect the trail from stream erosion.

**Environmental Considerations** – The entire project is located within the 100-year floodplain and portions are located within the stream buffer and wetland buffer. The Department determined that impacts to the stream buffer and wetland buffer resulting from the project are necessary in accordance with Subsection 16.116(c)(1) of the Howard County Code.

**Forest Conservation** – In accordance with Subsection 16.1202(b)(iv) the plan is exempt from forest conservation requirements. Few if any forest resources will be impacted since the project utilizes the alignment of existing trails.

**Landscaping** - The project complies with the Howard County alternative compliance provision of the Howard County Landscape Manual since existing site conditions will essentially remain unchanged and vegetation adjacent to the trail will be retained.

**Evaluation and Conclusions** – Site Development Plan complies with all applicable requirements of Final Development Plans FDP-023 and FDP-107-A-III as follows:

- **Setback Requirements (Criterion 6):**

Setback requirements imposed by the final development plans do not apply to this project since no structures are proposed.

- **Permitted Land Uses (Criterion 7):**

In accordance with the final development plans all open space land uses including, but not limited to, pedestrian and bicycle pathways are permitted. The project therefore complies with this criterion.

- **Height Limitations (Criterion 8):**

No height limitations are imposed upon structures for uses in Open Space Land Use Areas provided the proposed improvements are approved by the Planning Board. Since no structures are proposed the height limitation does not apply.

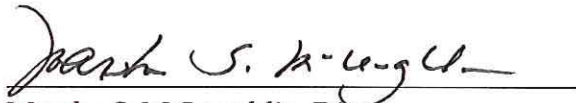
- **Parking Requirements (Criterion 9):**

No parking requirements are imposed on uses within Open Space Land Use Areas. The imposition of parking requirements is optional under FDP-023, however since the trail utilizes the bed of an existing path and connects two existing trails it is felt that no additional parking is needed.

**SRC Action:** The DPZ, Development Engineering Division, by memorandum dated April 14, 2014, notified the petitioner that the site development plan revision may be approved, subject to Planning Board approval.

The file for this project is available for public review at the Department of Planning and Zoning's public service counter, Monday through Friday, 8:00 a.m. to 5:00 p.m.

**Recommendation:** The DPZ recommends approval of the redline revision of Site Development Plan SDP-08-108.



Marsha S. McLaughlin, Director  
Department of Planning and Zoning

5/7/14  
Date

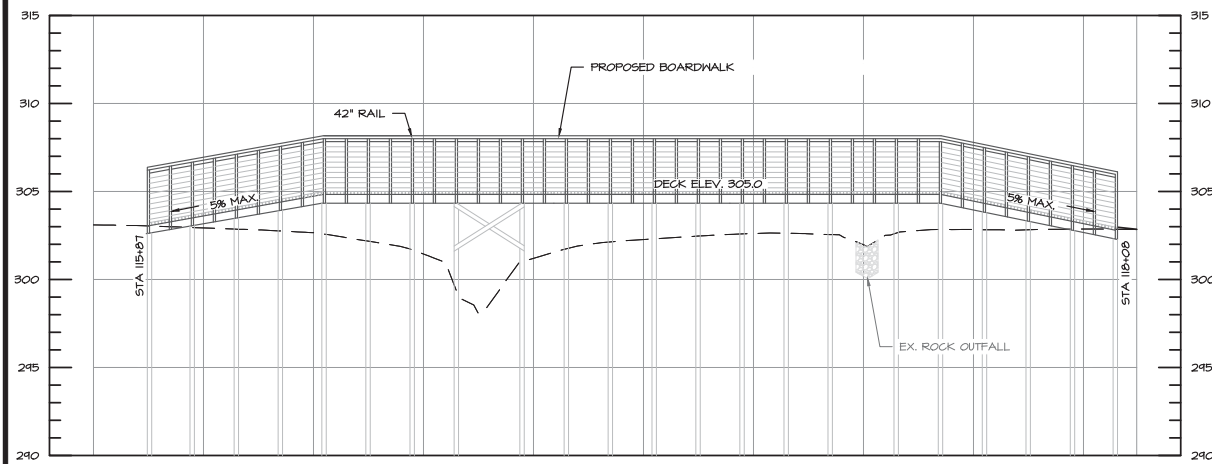
MSM:DBB:dbb

*KB*

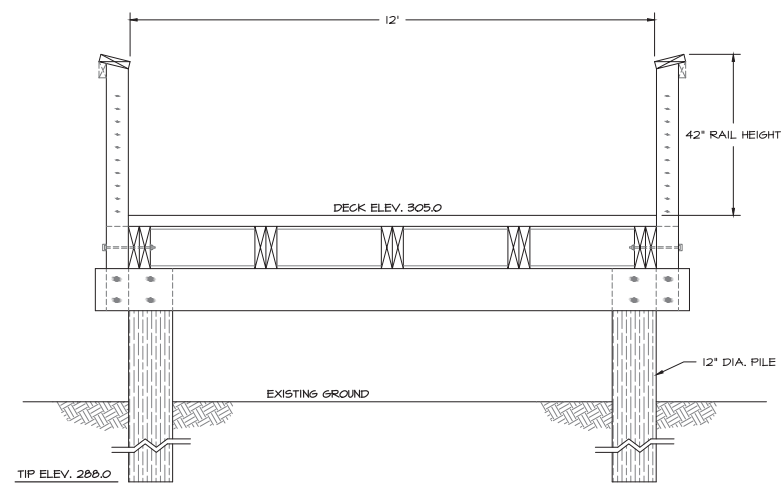


TRAIL TABLE	
EXISTING TRAIL TO BE PAVED	1,792 LF
BOARDWALK	220 LF
NEW TRAIL	578 LF
TOTAL	2,590 LF
LENGTH OF COMPLETED LOOP	1.5 MILES
PROPOSED BANK PROTECTION	165 LF





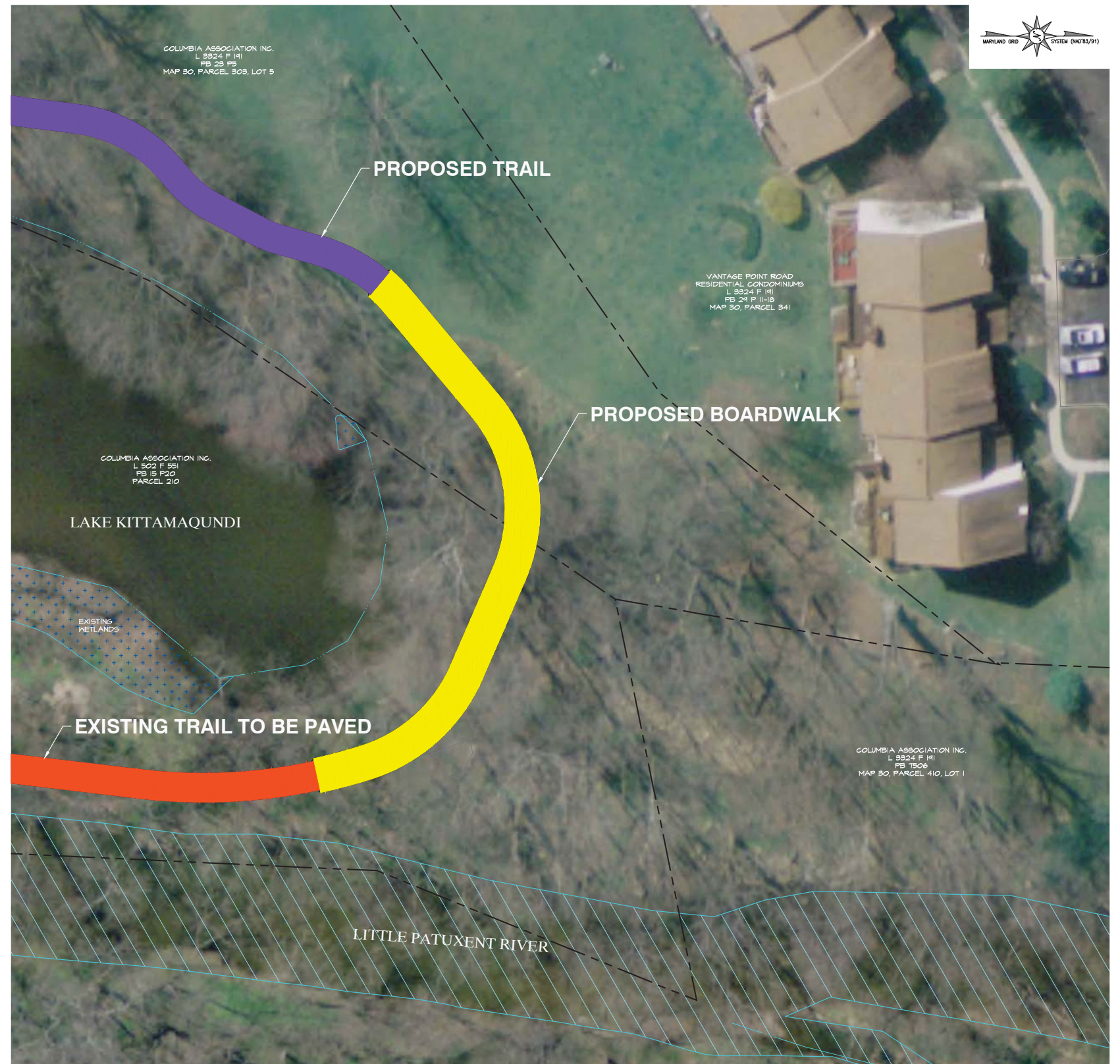
**BOARDWALK PROFILE**



**BOARDWALK SECTION VIEW**



**TYPICAL STAINLESS STEEL CABLE RAILING**



**Columbia Association**  
10221 WINCOPIN CIRCLE #100  
COLUMBIA, MD 21046  
(410) 381 - 2947

**BayLand Consultants & Designers, Inc.**  
"Integrating Engineering and Environment"  
1321 Mercedes Drive, Suite A Phone: (410)694-9401  
Hanover, Maryland 21076 Fax: (410)694-9405  
Email: bayland@baylandinc.com  
Website: http://www.baylandinc.com

**LAKE KITTAMAQUNDI MULTIUSE TRAIL  
BOARDWALK DETAILS**

# LAKE KITTAMAQUNDI MULTIUSE TRAIL

## CONSTRUCTION DRAWINGS

### COLUMBIA ASSOCIATION

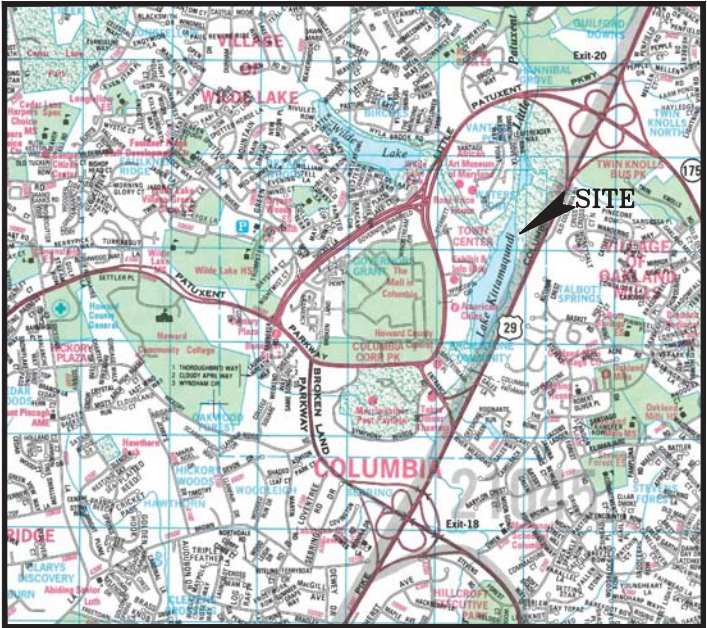
### HOWARD COUNTY, MARYLAND

#### GENERAL NOTES

1. HORIZONTAL AND VERTICAL SURVEY CONTROLS:  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS HOWARD CO. BM 30 BA AND BM 36 EA. ALL VERTICAL CONTROLS ARE BASED NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE BM 30 BA AND BM 36 EA.
2. THE EXISTING UTILITIES, GRADES, AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
3. CONTOURS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON HOWARD COUNTY 2011 GIS TOPOGRAPHY.
4. PROPERTY LINES SHOWN ARE BASED ON HOWARD COUNTY 2012 CADASTRAL DATA.
5. WETLAND DELINEATION WAS PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS, INC. ON JUNE 16TH 2013.
6. THE MARYLAND DEPARTMENT OF THE ENVIRONMENT PERMIT TRACKING NUMBER IS 201460150.
7. FEMA FIRM #24027C0155D EFFECTIVE NOVEMBER 6, 2013 SHOWS THAT THE PROJECT SITE IS LOCATED WITHIN ZONE A.
8. RIPRAP SHOWN IN PLAN VIEW AND PROFILE ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES.
9. THE SITE IS WITHIN THE LITTLE PATUXENT RIVER WATERSHED.
10. FOR DETAILS, MATERIALS, AND CONSTRUCTION METHODS NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL REFER TO HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY VOLUME IV ON SITE AT ALL TIMES.
11. THIS PLAN IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS UNDER SUBSECTION 16.1202(b)(1)(iv) SINCE IT IS PART OF A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
12. LANDSCAPING FOR THIS PLAN IS PROVIDED BY ALTERNATIVE COMPLIANCE BASED ON EXISTING SITE CONDITIONS AND VEGETATION.
13. THIS PLAN IS SUBJECT TO WAIVER PETITION WP-14-079, APPROVED ON FEBRUARY 18, 2014. WP-14-079 APPROVES A WAIVER TO SUBSECTIONS 16.115(c)(2), 16.116(a)(1), AND 16.116(a)(2)(iii) WHICH IS SUBJECT TO THE FOLLOWING CONDITIONS:  
a. HOWARD COUNTY APPROVAL OF REDLINE REVISION NO. 3 TO SDP-08-108  
b. STATE AND FEDERAL AUTHORIZATION OF REGULATED ACTIVITIES  
c. OBTAIN ALL REQUIRED PERMITS FROM THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS.  
d. OBTAIN ALL NECESSARY PERMISSION AND AGREEMENTS FROM THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) FOR THE PORTIONS OF THE PATHWAY LOOP LOCATED WITHIN THE US ROUTE 29 RIGHT-OF-WAY.

#### STORMWATER MANAGEMENT NOTE

STORMWATER MANAGEMENT REQUIREMENTS WILL BE PROVIDED FOR THE PROPOSED PAVED TRAIL AS SHOWN ON THIS PLAN VIA NON-ROOFTOP DISCONNECTION IN ACCORDANCE WITH THE CURRENT HOWARD COUNTY DESIGN MANUAL, VOLUME I: STORM DRAINAGE, CHAPTER 5: STORMWATER MANAGEMENT. A SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN WAS APPROVED ON JANUARY 13, 2014.



HOWARD COUNTY ADC MAP COORDINATES:  
MAP 15 GRID H-5

MAP COPYRIGHT UNIVERSAL MAP GROUP, LLC,  
PERMITTED USE NUMBER 20911186

#### LOCATION MAP

SCALE: 1"=2000'

#### LEGEND

TRAVERSE POINT		PROP. PATH	
EX. SPOT SHOT	X ELEV	PROP. BOARDWALK	
EX. BOUNDARY		PROP. IMBRICATED ROCK WALL	
EX. MINOR CONTOUR		PROP. CONSTRUCTION ACCESS	
EX. MAJOR CONTOUR		LIMIT OF DISTURBANCE	
EX. ROAD		SILT FENCE	
EX. TREELINE		TURBIDITY CURTAIN	
EX. VEGETATED BUFFER		TEMPORARY ACCESS BRIDGE	
EX. WATERS OF THE U.S.			
EX. 100-YR FEMA FLOODPLAIN			
EX. 15' NON-TIDAL WETLAND BUFFER			
EX. NON-TIDAL WETLANDS			
EX. IMBRICATED RIPRAP WALL			

#### PROJECT INFORMATION

- |                                 |   |
|---------------------------------|---|
| 1. OWNER/DEVELOPER:             | COLUMBIA ASSOCIATION<br>CONTACT: DENNIS MATTEY                              |
| 2. OWNER/DEVELOPER INFORMATION: | 9450 GERWIG LANE<br>COLUMBIA, MD 21046<br>410-381-0591                      |
| 3. ENGINEER:                    | BAYLAND CONSULTANTS AND DESIGNERS, INC.                                     |
| 4. ENGINEER INFORMATION:        | 1321 MERCEDES DRIVE, SUITE A<br>HANOVER, MARYLAND 21076<br>PH: 410-694-9401 |
| 5. TAX MAP:                     | 0036  |
| 6. PARCEL:                      | 0210  |
| 7. DEED REF:                    | 03324/00191   |
| 8. DISTRICT:                    | 15  |
| 9. HO. COUNTY TAX ID NO:        | 15-010657   |
| 10. USE:                        | OPEN SPACE  |
| 11. ZONING:                     | NEW TOWN  |
| 12. PROPERTY AREA:              | 39.8± ACRES   |
| 13. WATERSHED:                  | LITTLE PATUXENT RIVER   |

#### INDEX OF SHEETS

DRAWING NO.	SHEET NO.	SHEET TITLE
K-01	47	MULTIUSE TRAIL - COVER SHEET
K-02	48	MULTIUSE TRAIL - KEY SHEET
K-03	49	MULTIUSE TRAIL - DESIGN PLANS
K-04	50	MULTIUSE TRAIL - DESIGN PLANS
K-05	51	MULTIUSE TRAIL - DESIGN PLANS
K-06	52	MULTIUSE TRAIL - DESIGN PLANS
K-07	53	MULTIUSE TRAIL - DESIGN PLANS
K-08	54	MULTIUSE TRAIL - CROSS SECTIONS & DETAILS
K-09	55	MULTIUSE TRAIL - BOARDWALK DETAILS
K-10	56	MULTIUSE TRAIL - BOARDWALK DETAILS
K-11	57	MULTIUSE TRAIL - EROSION AND SEDIMENT CONTROL PLAN
K-12	58	MULTIUSE TRAIL - EROSION AND SEDIMENT CONTROL PLAN
K-13	59	MULTIUSE TRAIL - EROSION AND SEDIMENT CONTROL NOTES & DETAILS

#### SITE ANALYSIS

- |  |            |
|--|------------|
| 1. TOTAL DISTURBED AREA:                   | 2.87 ACRES |
| 2. TOTAL AREA TO BE STABILIZED:            | 2.87 ACRES |
| 2.1. TOTAL EX. IMP. AREA:                  | 0.00 ACRES |
| 2.2. TOTAL PR. IMPERVIOUS AREA:            | 0.55 ACRES |
| 2.3. TOTAL STABILIZED CONSTRUCTION ACCESS: | 0.33 ACRES |
| 2.4. TOTAL TO BE VEGETATIVELY STABILIZED:  | 1.99 ACRES |
| 3. PROPOSED IMPERVIOUS AREA:               | 0.88 ACRES |
| 4. ESTIMATED CUT:                          | 620 CY     |
| 5. ESTIMATED FILL:                         | 0 CY       |

NOTE:  
THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

#### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21194, EXPIRATION DATE: 04/20/2016.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division

Date

Chief, Division of Land Development

Date

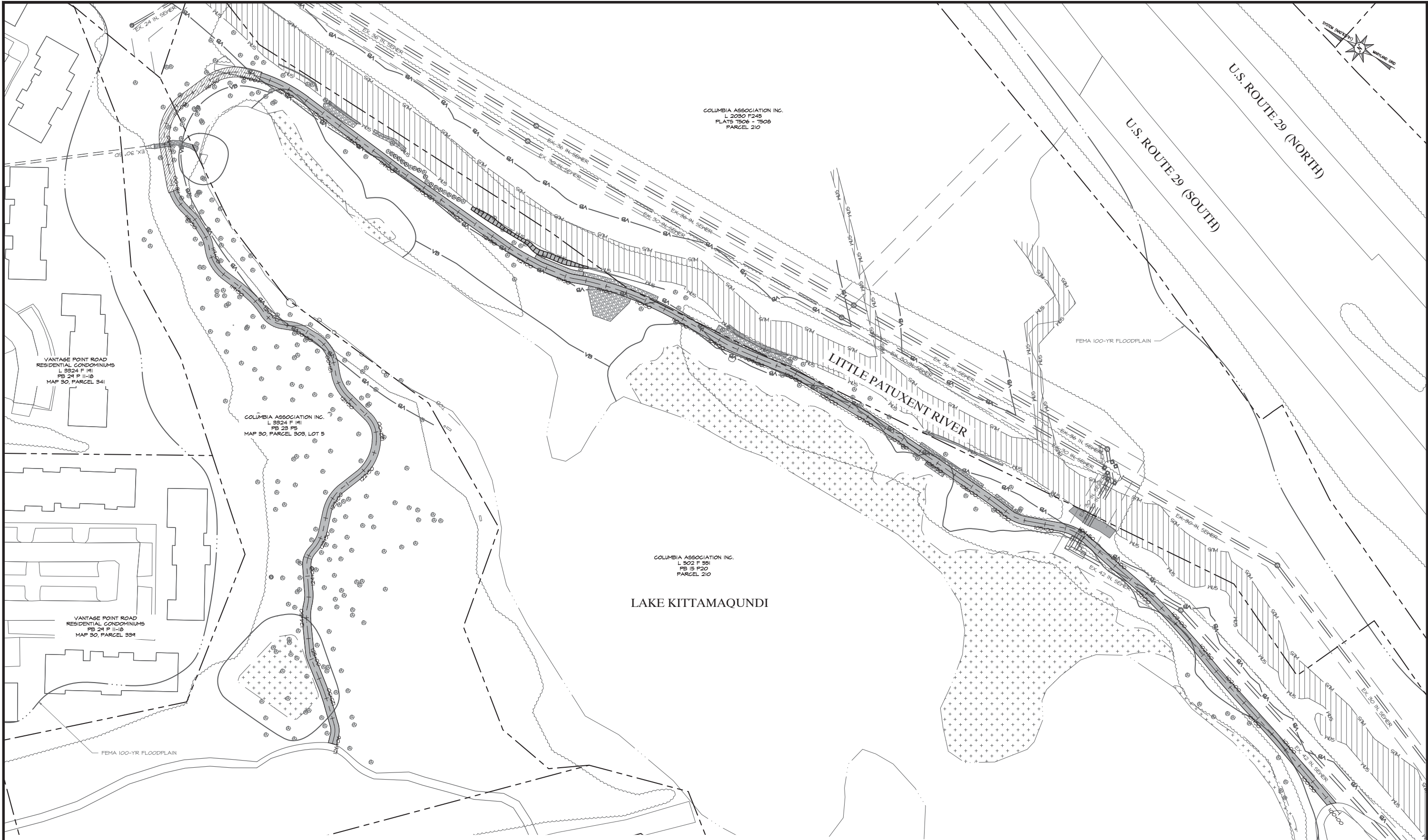
Director

Date

REVISED SITE DEVELOPMENT PLAN

#### LAKE KITTAMAQUNDI MULTIUSE TRAIL COVER SHEET

REVISIONS			SCALE: AS-SHOWN	
DATE	BY	DESCRIPTION		
			DRAWN BY: MKB	DATE: 04/21/14
			CHECKED BY: SB	DATE: 4/21/2014
			DESIGNED BY: MKB	DATE: 04/21/14
			DRAWING K-01, SHEET NO. 47 OF 59	
			SDP-08-108	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
Chief, Division of Land Development	Date
Director	Date

**Columbia Association**  
10221 WINCOPIN CIRCLE #100  
COLUMBIA, MD 21046  
(410) 381 - 2947

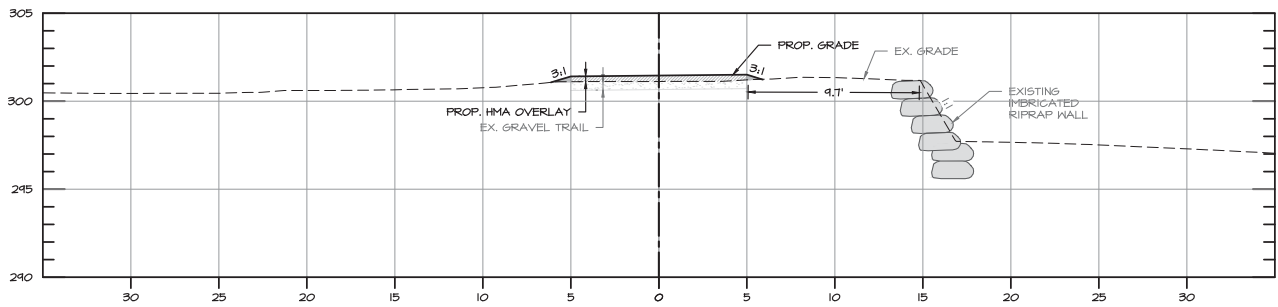
**BayLand Consultants & Designers, Inc.**  
"Integrating Engineering and Environment"  
1321 Mercedes Drive, Suite A Phone: (410)694-9401  
Hanover, Maryland 21076 Fax: (410)694-9405  
Email: bayland@baylandinc.com  
Website: http://www.baylandinc.com  
BAYLAND JOB NO. 8\_16202

REVISED SITE DEVELOPMENT PLAN

**LAKE KITTAMAQUNDI MULTIUSE TRAIL KEY SHEET**

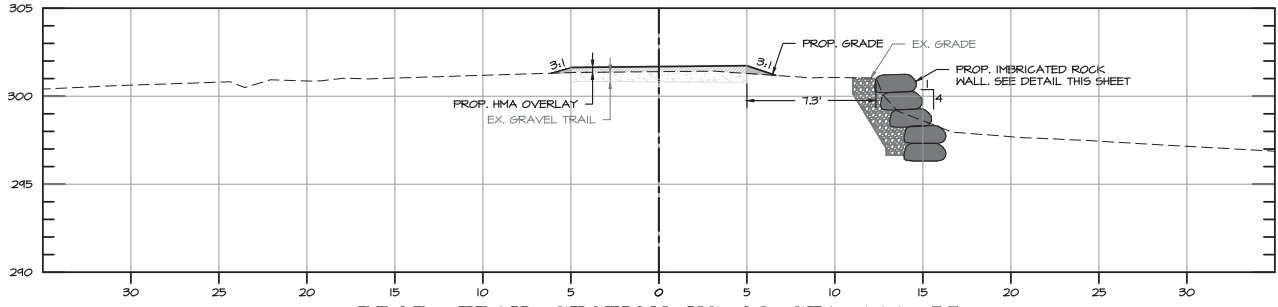
REVISIONS			SCALE: 1" = 50'	
DATE	BY	DESCRIPTION	DRAWN BY: MKB	DATE: 04/21/14
			CHECKED BY: SB <th>DATE: 04/21/14</th>	DATE: 04/21/14
			DESIGNED BY: MKB <th>DATE: 04/21/14</th>	DATE: 04/21/14
			DRAWING K-02, SHEET NO. 48 OF 59	
			SDP-08-108	

Z:\G\_16202 LAKE KITTAMAQUNDI MULTIUSE TRAIL\CAD Files\Sheet Files\G\_16202 KEY01



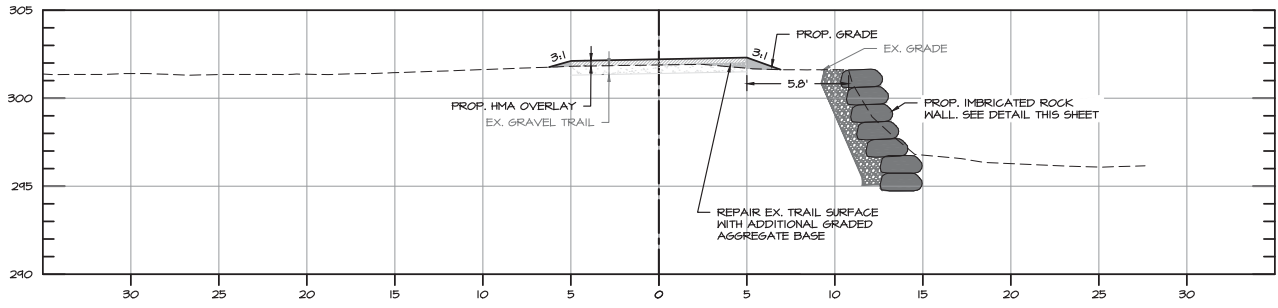
PROP. TRAIL SECTION XS 01 STA 111+25

SCALE: 1" = 5'



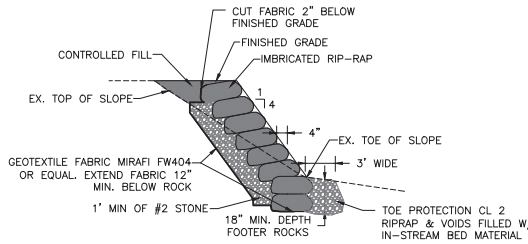
PROP. TRAIL SECTION XS 02 STA 111+55

SCALE: 1" = 5'



PROP. TRAIL SECTION XS 03 STA 111+95

SCALE: 1" = 5'



IMBRICATED ROCK WALL DETAIL

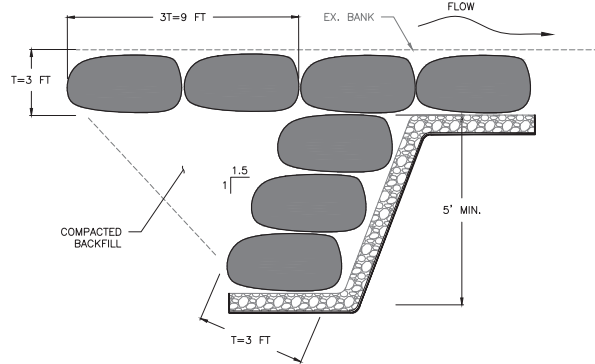
SCALE: NTS

### IMBRICATED ROCK WALL NOTES

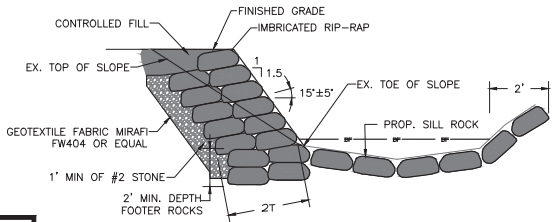
1. ALL MATERIALS SHALL BE UNDERLAIN BY MIRAFI FW404 GEOTEXTILE FABRIC OR EQUAL.
2. WHEN BACKFILLING, ALL MATERIAL SHALL BE COMPACTED FIRMLY IN ALL VOIDS TO SECURE STONE. ALL SOIL SHALL BE COMPACTED TO MD-378 STANDARDS.
3. IMBRICATED ROCK WALL SHALL BE CONSTRUCTED SUCH THAT ALL ROCKS SECURELY INTERLOCK AND SHALL NOT ROCK OR ROTATE IN PLACE. ALL ROCKS EXCEPT BOTTOM FOOTER ROCKS SHALL BE SUPPORTED BY A FOOTER ROCK.
4. IMBRICATED ROCK SHALL BE OBLONG AND FLAT IN APPEARANCE WITH TWO PARALLEL FACES, AND SHALL BE STACKABLE.
5. ALL ROCK SHALL BE GRANITE ROCK THAT IS TAN, DARK BROWN, OR DARK GRAY IN COLOR. ROCKS NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.

### ROCK SIZE TABLE

ROCK TYPE	SIZE	% BY WEIGHT
IMBRICATED ROCK	GREATER THAN 16" X 18" X 24"	20
	8" X 9" X 12" TO 16" X 18" X 24"	80



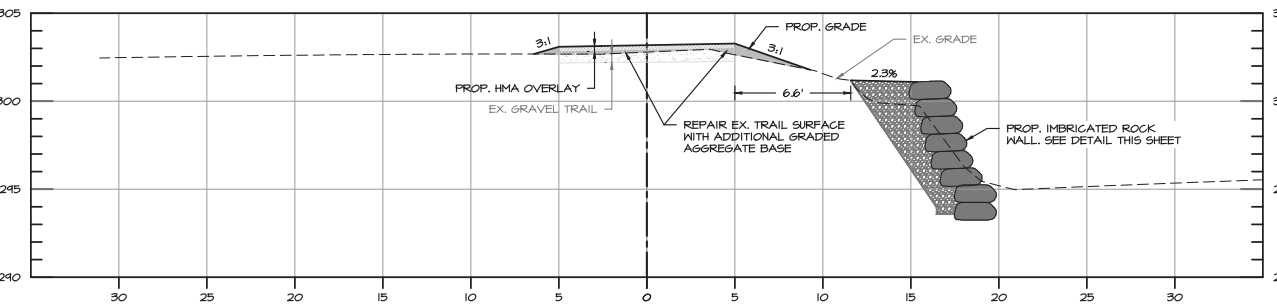
PLAN



SECTION

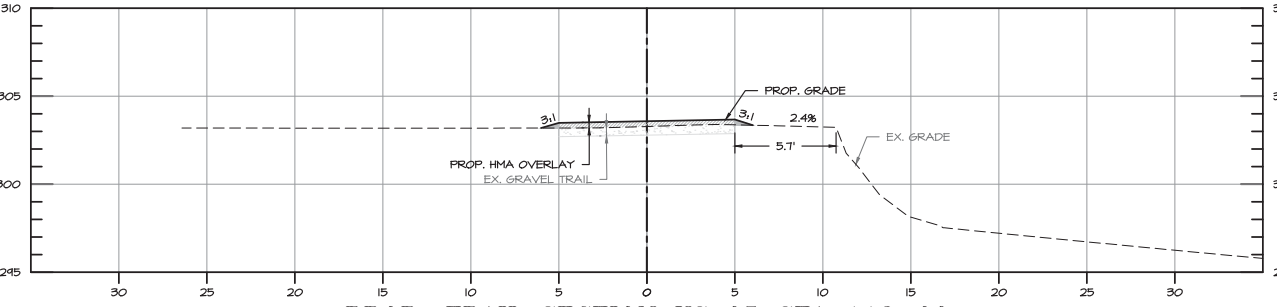
### UPSTREAM FLANK DETAIL

SCALE: NTS



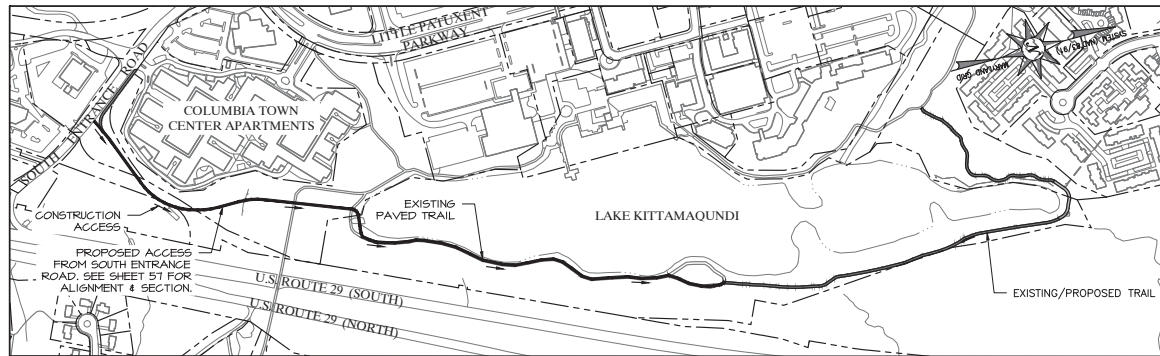
PROP. TRAIL SECTION XS 04 STA 112+65

SCALE: 1" = 5'



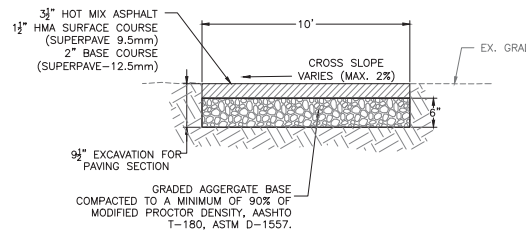
PROP. TRAIL SECTION XS 05 STA 113+00

SCALE: 1" = 5'



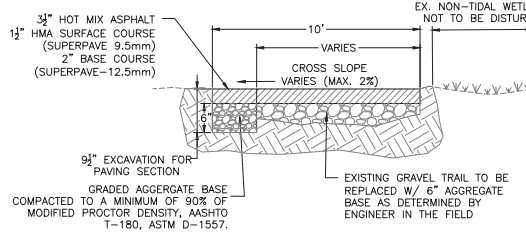
CONSTRUCTION ACCESS

NOT TO SCALE



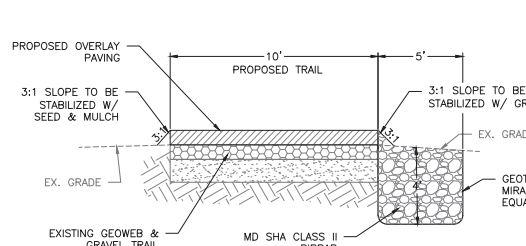
FULL DEPTH PAVING PATH DETAIL

NOT TO SCALE



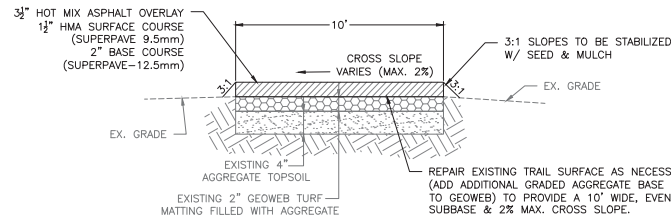
WIDENING & FULL DEPTH PAVING PATH DETAIL

NOT TO SCALE



OVERFLOW PROTECTION DETAIL

NOT TO SCALE



OVERLAY PAVING PATH DETAIL

NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division

Date

Chief, Division of Land Development

Date

Director

Date



10221 WINCOPIN CIRCLE #100  
COLUMBIA, MD 21046  
(410) 381 - 2947

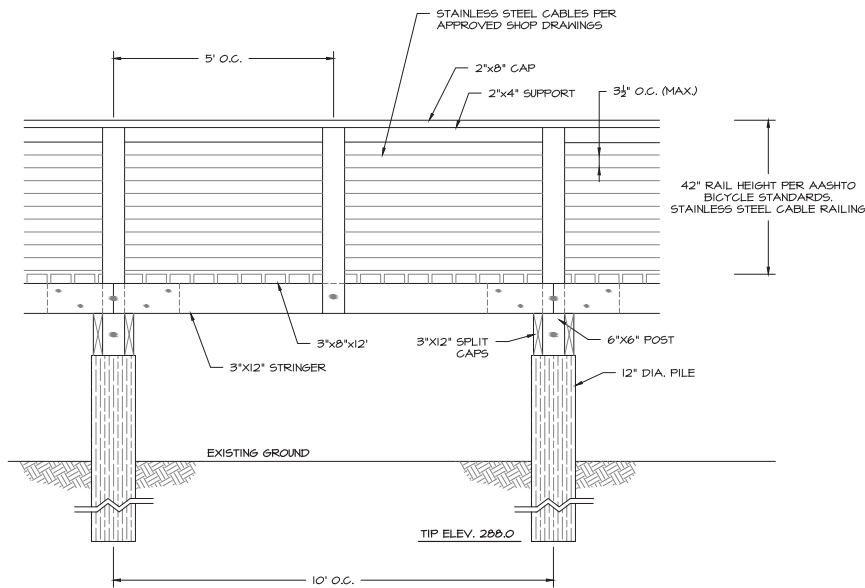


"Integrating Engineering and Environment"  
1321 Mercedes Drive, Suite A Phone: (410)694-9401  
Hanover, Maryland 21076 Fax: (410)694-9405  
Email: bayland@baylandinc.com  
Website: http://www.baylandinc.com  
BAYLAND JOB NO. 8\_16202

### LAKE KITTAMAQUNDI MULTIUSE TRAIL CROSS SECTIONS & DETAILS

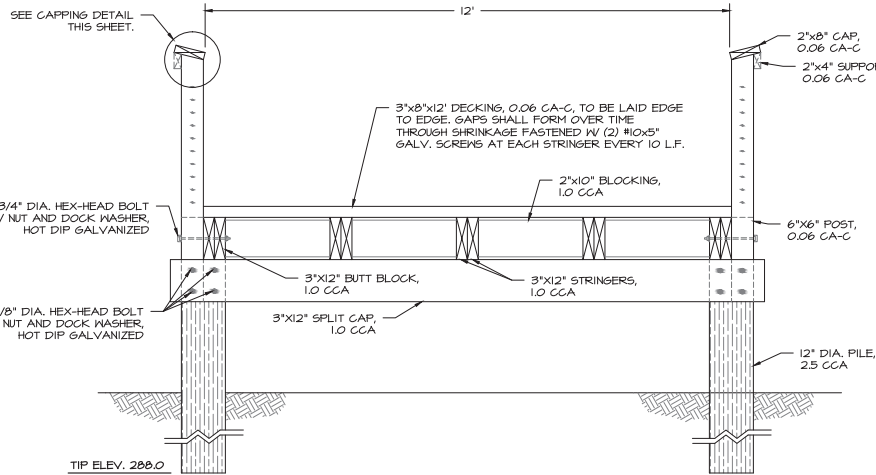
REVISIONS			SCALE: 1" = 5'	
DATE	BY	DESCRIPTION	DRAWN BY: MKB	DATE: 04/21/14
			CHECKED BY: SB	DATE: 4/21/2014
			DESIGNED BY: MKB	DATE: 04/21/14
			DRAWING K-08, SHEET NO. 54 OF 59	

SDP-08-108



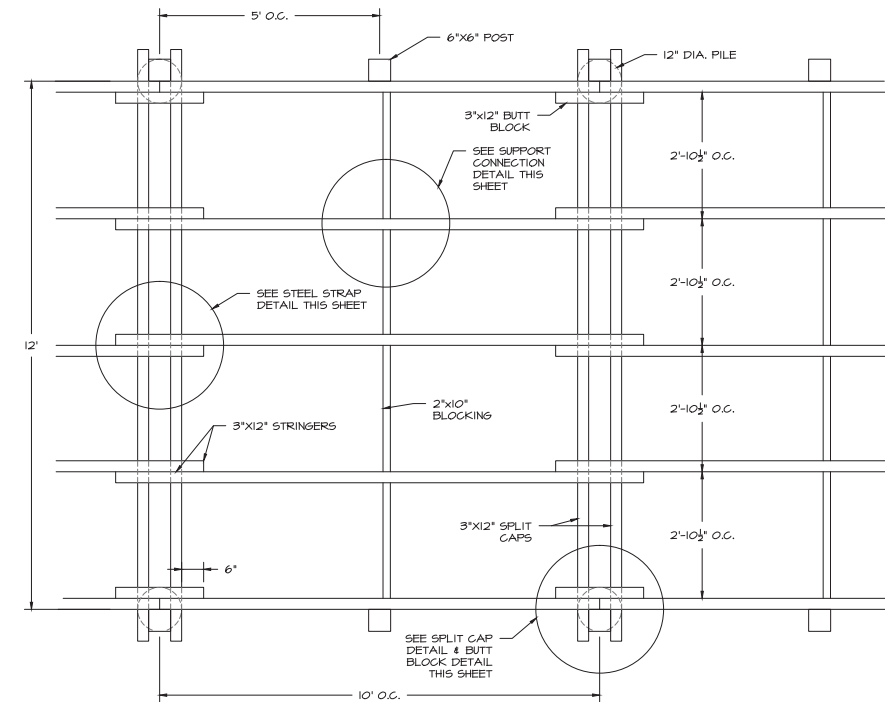
BOARDWALK SIDE VIEW

SCALE: 1" = 2'



BOARDWALK SECTION VIEW

SCALE: 1" = 2'

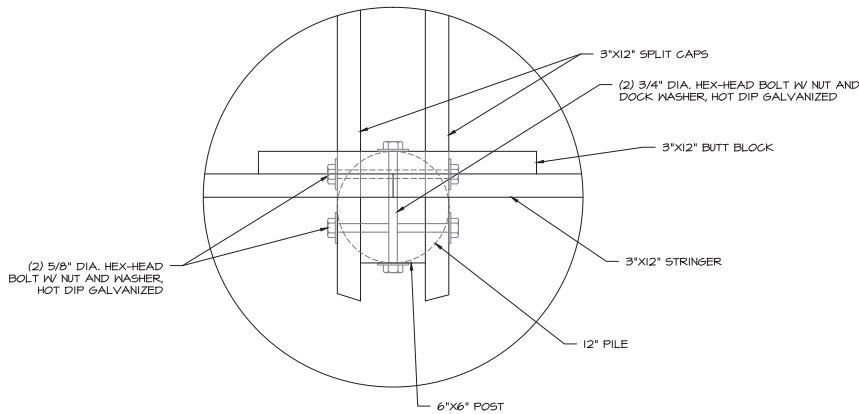


BOARDWALK DECKING PLAN

SCALE: 1" = 2'

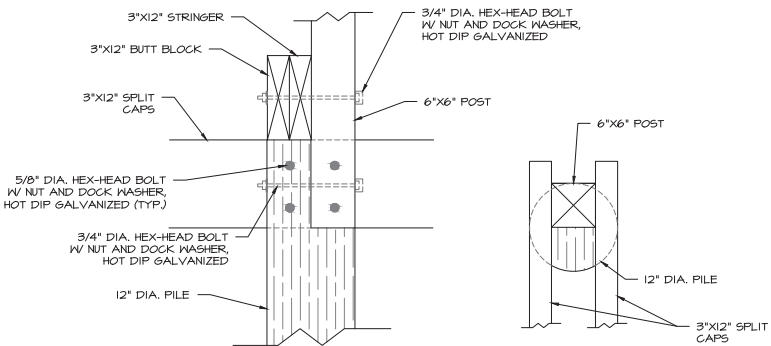
STAINLESS STEEL CABLE RAILING NOTE

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PROPOSED STAINLESS STEEL CABLE RAILING SYSTEM. THE SHOP DRAWINGS MUST BE STAMPED APPROVED BY MARYLAND REGISTERED PROFESSIONAL ENGINEER.



SPLIT CAP DETAIL

NOT TO SCALE



SIDE VIEW

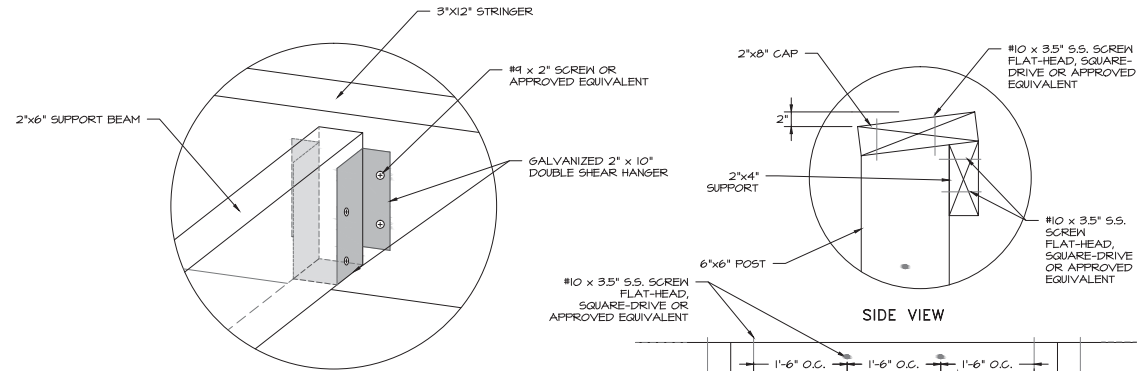
TOP VIEW

PILE DETAILS

SCALE: 1" = 1'

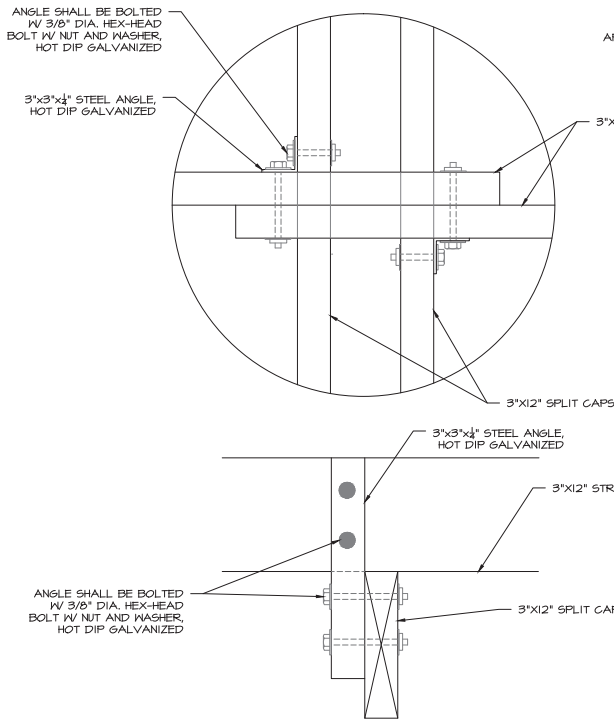
NOTES:

- ALL PILES SHALL BE 12" DIA. TIMBER TYPE 'B' AND TREATED W/ 2.5 CCA
- ALL DIMENSIONAL LUMBER SHALL BE NO.1 SYP
  - STRUCTURAL LUMBER SHALL BE TREATED W/ 1.0 CCA
  - DECKING, POSTS, & CAPS SHALL BE TREATED W/ 0.06 C.A.-C
- ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED (GALV.) OR 305 STAINLESS STEEL (S.S.) AS NOTES ON PLANS
- ALL EXPOSED HARDWARE SHALL BE COUNTERSUNK



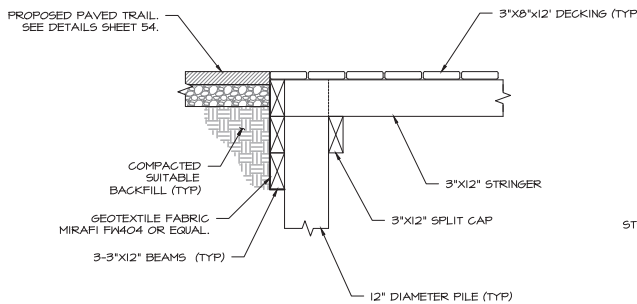
SUPPORT CONNECTION DETAIL

NOT TO SCALE



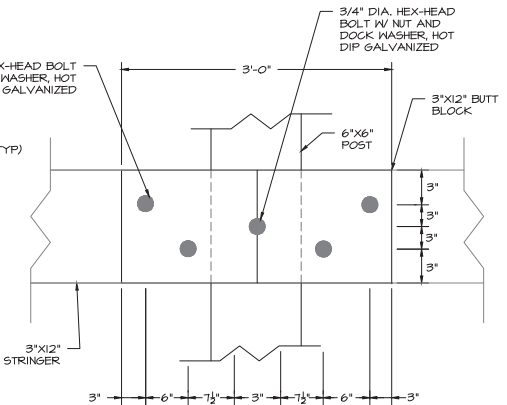
STEEL STRAP DETAIL

NOT TO SCALE



BOARDWALK TO PAVED TRAIL TRANSITION

SCALE 1" = 2'



BUTT BLOCK DETAIL

NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division

Date

Chief, Division of Land Development

Date

Director

Date



10221 WINCOPIN CIRCLE #100  
COLUMBIA, MD 21046  
(410) 381 - 2947



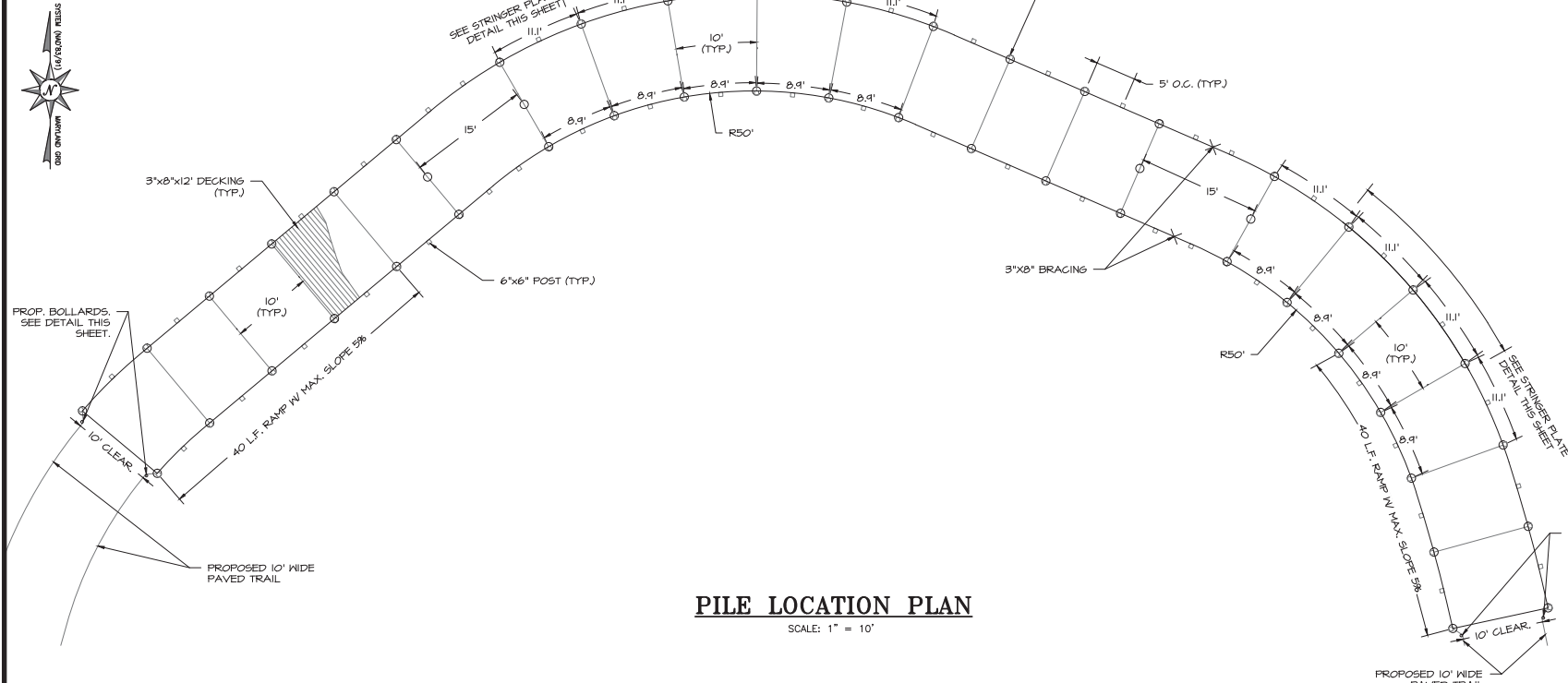
"Integrating Engineering and Environment"  
1321 Mercedes Drive, Suite A Phone: (410)694-9401  
Hanover, Maryland 21076 Fax: (410)694-9405  
Email: bayland@baylandinc.com  
Website: http://www.baylandinc.com

REVISED SITE DEVELOPMENT PLAN

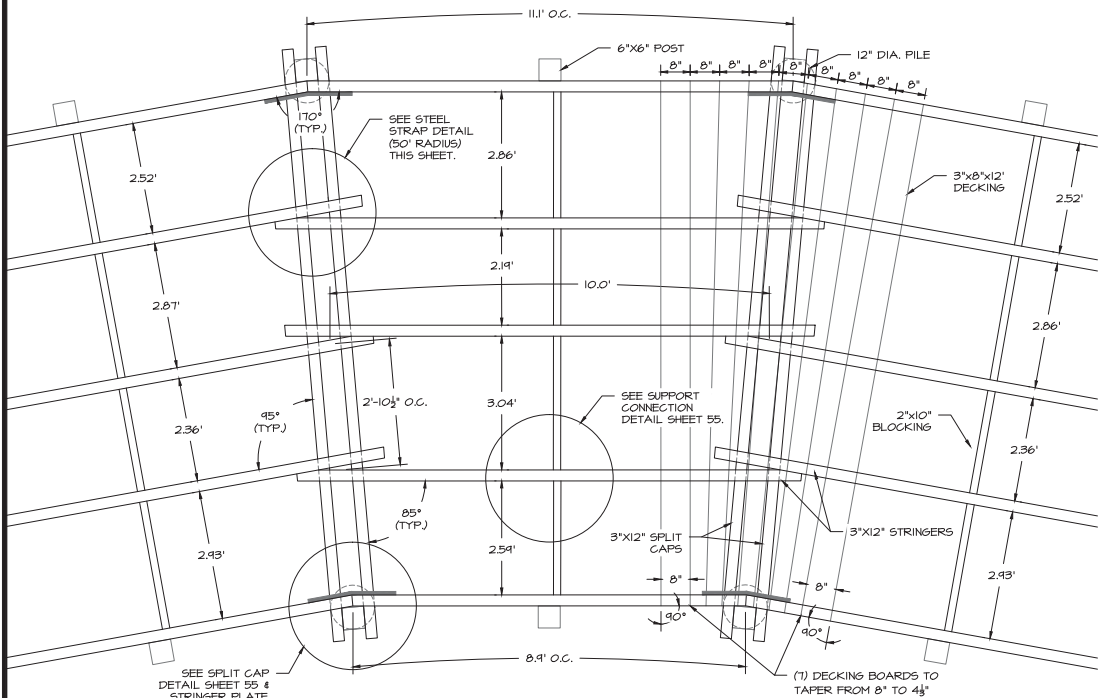
LAKE KITTAMAQUNDI MULTIUSE TRAIL  
BOARDWALK DETAILS

REVISIONS			SCALE: AS-SHOWN	
DATE	BY	DESCRIPTION	DRAWN BY: MKB	DATE: 04/21/14
			CHECKED BY: SB	DATE: 4/21/2014
			DESIGNED BY: MKB	DATE: 04/21/14
			DRAWING K-09, SHEET NO. 55 OF 59	
			SDP-08-108	

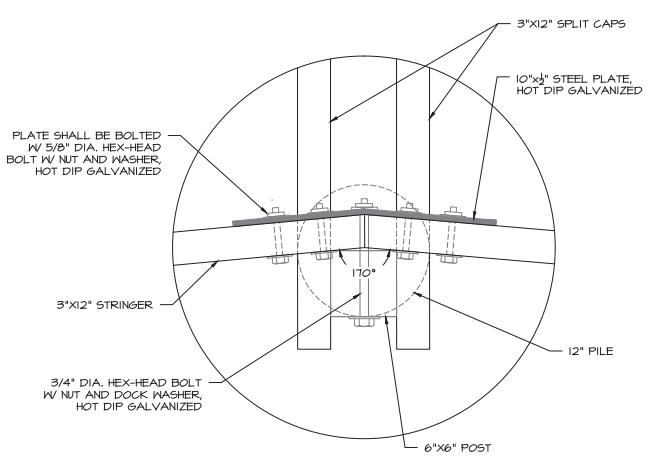
Z:\6116202-LAKE-KIT-MULTIUSE-TRAIL\CAD Files\Sheet Files\6.116202-SDT01



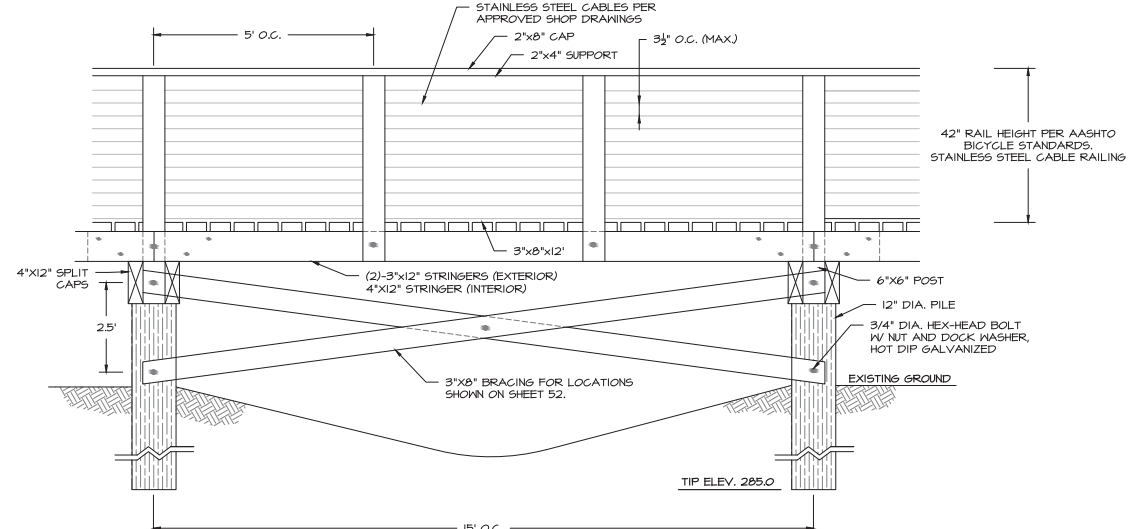
**PILE LOCATION PLAN**  
SCALE: 1" = 10'



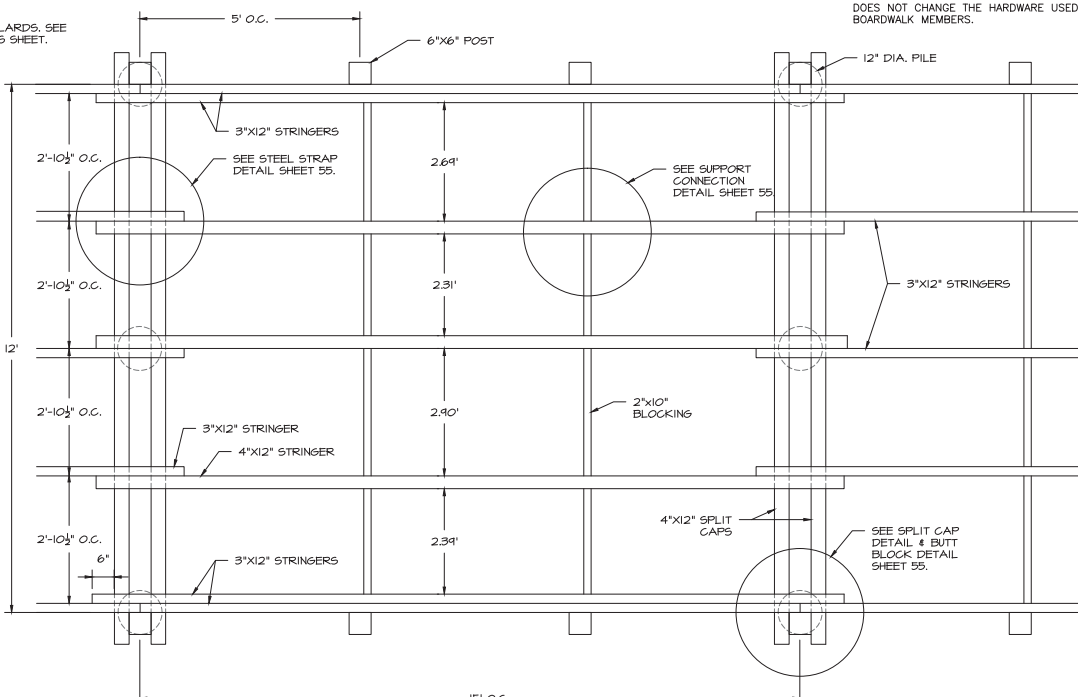
**BOARDWALK DECKING PLAN (50' INSIDE RADIUS)**  
SCALE: 1" = 2'



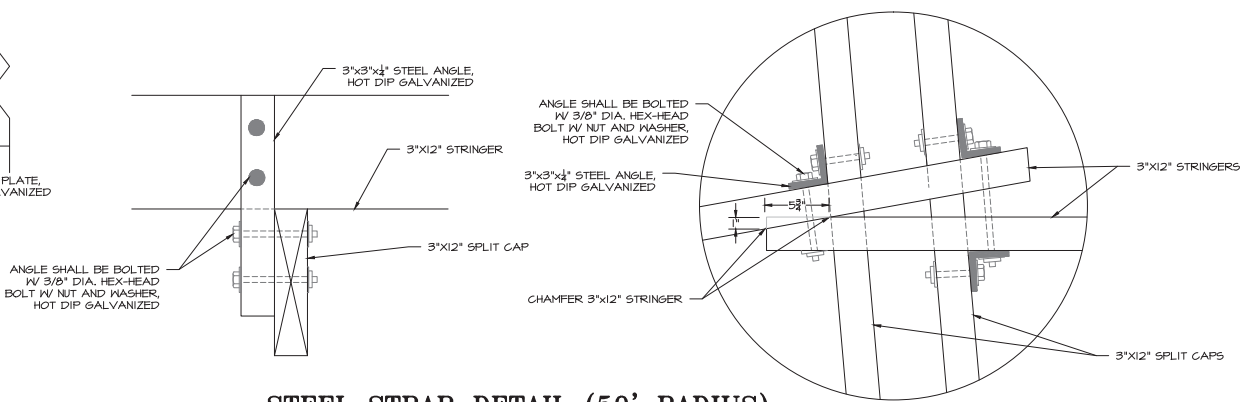
**STRINGER PLATE DETAIL**  
NOT TO SCALE



**BOARDWALK SIDE VIEW (15' O.C. PILES)**  
SCALE: 1" = 2'



**BOARDWALK DECKING PLAN (15' O.C. PILES)**  
SCALE: 1" = 2'



**STEEL STRAP DETAIL (50' RADIUS)**  
NOT TO SCALE

**REVISED SITE DEVELOPMENT PLAN**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

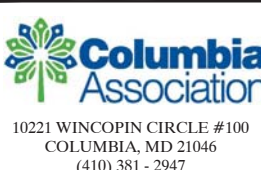
Chief, Development Engineering Division	Date
Chief, Division of Land Development	Date
Director	Date

**NOTES:**

- ALL PIPE TO BE STANDARD WEIGHT AS PER AISC MANUAL.
- ALL EXPOSED METAL SURFACES SHALL BE PAINTED WITH GALVANIZED PAINT - ONE COAT METAL PRIMER AND TWO COATS STANDARD SAFETY YELLOW # 4540 METAL ENAMEL.

**BOLLARD DETAIL**

NOT TO SCALE



LAKE KITTA MAQUNDI MULTIUSE TRAIL BOARDWALK DETAILS				
REVISIONS			SCALE: AS-SHOWN	
DATE	BY	DESCRIPTION	DRAWN BY: MKB	DATE: 04/21/14
			CHECKED BY: SB	DATE: 4/21/2014
			DESIGNED BY: MKB	DATE: 04/21/14
			DRAWING K-10, SHEET NO. 56 OF 59	